

DIESEL-HYDRAULIC MENU

[D600 Warship class](#)[D800 Warship class](#)[D1000 Western class](#)[D6300 Baby Warship class](#)[D7000 Hymek class](#)[The Modernisation Plan](#)[Western diesel engines](#)[Steam Locomotive Index](#)[Sitemap](#)[Home](#)[Accessibility](#)

D7000 'Hymek' class introduction

The 'Hymek' class were unique by the fact that they were the only Type 3 diesel-hydraulics to be built as this was not part of the Modernisation Plan for Britain's railways. Beyer Peacock were hoping for a share of the diesel orders placed for Britain's railways and were in fact building shunting locomotives plus 200 sets of underframes for the BR locomotives. With an intention of supplying complete locomotives for future orders, Beyer Peacock looked into the possibility of building main-line diesel-hydraulics, and although BR employed Type 2 D6300 class and Type 4 Warship class, none was announced for a Type 3 machine of 1501 to 1750 hp.

In response, Beyer Peacock formed a consortium in 1958 with Bristol Siddeley Engines and J. Stone of Deptford. Beyer Peacock (Hymek) Limited. Their design for a Type 3 locomotive featured a 16-cylinder Maybach MD870 engine of 1,920 hp, coupled with the Mekydro K184U transmission. Construction was to be based at Beyer Peacock's Gorton Works in Manchester.

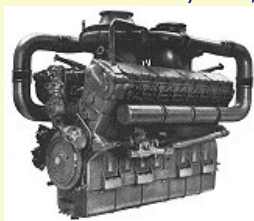
In June 1959, the BTC ordered an initial batch of 45 'Hymeks' at a cost of £80,000 each, but in July 1960, before the first 'Hymek' entered traffic, the BTC ordered a further 50 locomotives, such was the confidence in the design. A final batch of 6 locomotives was ordered in December 1961.

The Maybach MD870 engine was basically a stretched version of the MD655 engine to be used in the 'Western' class, but with four intercoolers and two turbochargers. Power was reduced to 1,740 hp at 1500 rev/min to bring it in line with the Type 3 specification. Manufacture of the engine was to be at Bristol Siddeley's engine plant at Ansty, near Coventry although the first 20 units contained a number of parts from Germany. Similarly, of the 116 sets of Mekydro transmissions, 91 were made by J. Stone with the remaining 25 built in Friedrichshafen.

The stretched-skin type of body construction so successfully used by the 'Warship' and 'Western' classes was not required for the 'Hymeks'. With conventional construction and, of course, a single engine and transmission, an adhesion weight of 75 tons was perfectly satisfactory. In addition, the absence of special construction methods removed the need for training of Beyer Peacock's workforce entering into a licencing agreement with the Germans. The main load-bearing members of the 'Hymek' underframe were longitudinal rolled steel joists to which lighter angle sections were added to form the body framing. The body panels were made from lightweight sheets as they were non-loadbearing as shown by the use of fibreglass mouldings for the front and side panels.

The bogie used on the 'Hymeks' was the tried and trusted Commonwealth design, to which, wheels of 45 inches diameter were fitted. This was an odd size for the Western Region as previous diesel-hydraulic locomotives used wheels of 48 inches diameter.

The first 'Hymek', number D7000, was handed over to the Western Region on the 16th May 1961 in a ceremony at Paddington station, almost two months ahead of schedule, however, the last 'Hymek' number D7100 was held up until February 1964, after problems at Gorton caused a delay in delivery for almost 18 months.



There were two main differences between the first and last members of the class in terms of equipment. Numbers D7000 to D7044 were fitted with the Stone-Vapor train heating boiler and brakes were of the Knorr air type together with Laycock-Knorr compressors. Numbers D7045 to D7100 used the Stone-Vapor IIIa train heating boiler and brakes and compressors were supplied by Westinghouse. The air horns on the first three members, which was under the buffer beam, was moved to the cab roof on the remainder of the class and those first members had their horns repositioned to the cab roof also.

Livery on all members of the class when delivered was Brunswick Green with a light green band running along the length of the locomotive at waist height. In addition, the window surrounds were painted white. The running number was painted in an unusual feature of the class in that the cabside numbers were made from cast aluminium. The 'Hymeks' did not use the "TOPS" style of numbering which would have been 'Class 35'.

In Use.

The first problems to befall the class arrived at the end of 1961. The engine coolant temperatures were found to be excessive in addition to the more serious problem of transmissions failing on starting. The Western Region was concerned with this latter fault, and to isolate the cause, the class were split into two groups. The odd numbered locomotives up to number D7075 had the engine derated to 1,350 hp whereas the even numbered members up to number D7100 had the first gear locked out of use. After much investigation it was found that there was a weakness in the transmission design, not changing gear at the preset engine speeds, which in turn caused them to overheat. A strengthened control gear was found to be sufficient and all of the 'Hymeks' returned to normal condition by the end of 1963.



The Maybach MD870 engine generally have good performance and reliability, although occasional engines loosing coolant into the cylinders. By the 1970s, the engine had completed 8,000 to 10,000 hours service between overhauls. The Mekydro transmission, however, was prone to several faults including converter failure, damage to the gears, stripped gear teeth and metal in the filters. The rate of failed transmissions got so bad that spare units were constantly in short supply and to keep some members of the class in service, transmissions had to be borrowed from other 'Hymeks'. Following a period when the 'Hymeks' were given relatively easy workloads and schedules, the class turned in poor performance of all the diesel-hydraulics.



The first 'Hymeks' to be withdrawn were numbers D7006 and D7081 in September 1971. A additional 78 me withdrawn by the end of 1972 leaving just 21 examples, 14 at Old Oak Common and 7 at Bristol Bath Road to f future. However, by the end of 1973, ten survivors were still in service due to the 'Hymeks' replacement locomotive Type 2 (Class 31), initially suffering twice the failure rate of the 'Hymeks'.

British Railways organised a 'Hymek Swansong' tour on the 22nd of September 1973, hauled by D7001 and D the pair were waiting at Didcot, number D7026 ran through with an Oxford express as if to show that the class w finished. And so it turned out that way, as just four 'Hymeks' were withdrawn during 1974 leaving D7011/17/18/22/2 service towards 1975. However the 'Hymek' survival could not last forever and in January 1975 D7028 was withdraw by D7029 in February and the last four in March.

Many people regretted the passing of the 'Hymeks' as they were probably the most reliable and successfu diesel-hydraulics. Their downfall was the lack of standardisation of parts with other locomotive classes togeth shortage of spare parts which led to the cannibalisation of the withdrawn examples to keep the few remaining loc traffic, a situation not helped by the closure of Beyer Peacock in July 1966.

Preservation.

Four 'Hymek' locomotives escaped the cutter's torch and they are numbers D7017, D7018 D7029 and D7076.

Specifications.

Wheel arrangement	Bo-Bo	Wheel diameter	3ft 9in
Weight	74 tonnes	Height	12ft 10½ in
Length	51ft 8½in	Width	8ft 8½in
Minimum curve negotiable	4 chains	Maximum speed	90mph
Wheelbase	36ft	Heating type	D7000-44: Steam - Stone OK4616, D7045-100: Steam Spanner Mk III
Brake force	33 tonnes	Tractive effort	46,600 lb
Total engine horsepower	1,740 hp	Power at rail	n/a
Fuel tank capacity	800 gallons	Boiler water capacity	800 gallons

Diesel - Hydraulic Locomotive Menu			
D600 Warship class introduction	D800 Warship class introduction	D1000 Western class introduction	D6300 'Baby' Warship class introduction
Home Page The Modernisation Plan Western Region diesel engines			
Sounds of Steam Sitemap Steam Locomotive Index			

[HOME](#)[EVENTS](#)[LOCO ROSTER](#)[FLEET INFO](#)[DRIVER EXPERIENCE](#)[VISITOR INFO](#)[ABOUT THE LINE](#)[ABOUT US](#)[SALES & APPEALS](#)[VOLUNTEERS](#)[CONTACTS](#)

D 7076



D7076

Current Status: Operational

Current Livery: BR Blue with Full Yellow Ends

Running Number: D7076

Built: Beyer Peacock (Hymek) Ltd
Manchester 1962, No 7980

Power Unit: Maybach MD870

Transmission: Stone-Maybach Mekydro K184u

Power Output: 1,700 HP

Maximum Speed: 90 MPH

Train Brakes: Vacuum Only

Train Heating: Steam Heat (Isolated)

Weight: 75 Tons

Length: 51' 8½"

Height: 12' 10"

Width: 8' 10"

D7076 is one of four preserved 'Hymeks' although it is the only preserved example from the later MkII batch. New in 1962, D7076 along with the other Hymeks had a very short service life, being withdrawn in May 1973 although the loco was retained at the Railway Technical Centre in Derby along with classmate D7096, used as dead loads for experiments and suchlike.

By the time D7076 was secured for preservation both of the RTC Hymeks were in a bad state but it was possible to restore one by using spares from the other. D7096 was the donor locomotive and

its number is carried in D7076's B-end cab in memory. D7096 was reduced to a shell and cut up.

D7076 was amongst the earliest Diesel Locomotives at the ELR, being one of the Bury Hydraulic Group fleet along with D9531, D832 and D1041. During 2009, D7076 became what is known as a 'Wesmek', BHG creativity at its best! D7076's power unit was requiring attention and D1041 was out of action but had a servicable Maybach MD655 engine which would fit so, the roof section of D7076 was altered and the MD655 inserted. A replacement engine was found for D7076 and the loco regained Hymek status proper with the return of the new MD870 in 2011.

It's fair to say D7076 is always a popular runner! Recent general maintenance has included replacement of its Vacuum Exhauster and attention to the batteries. Sadly the loco was subject to vandalism towards the end of May, one of the drivers windcreens being smashed, this has now been replaced.

Following much needed bodywork repairs D7076 returned to traffic for the Summer Diesel Gala 2014, ex-works in BR Blue. D7076 also had the honour of hauling the **Diesel Diner** on Saturday Evening, 27th of September, during the 2014 Autumn Diesel Gala Weekend.

A small selection of photographs of D7076 through the years
Click on any thumbnail to view the gallery



< [33117](#) | [Fleet Information](#) | [37109](#) >

locomotive group appeals

With such a large fleet of different locomotives it can be easy for those which are out of service undergoing restoration or essential repairs to get 'lost' or forgotten about. The following is a selection of links to individual locomotive group appeal pages. If you have a little to spare towards a favourite cause they will be extremely happy to hear from you.



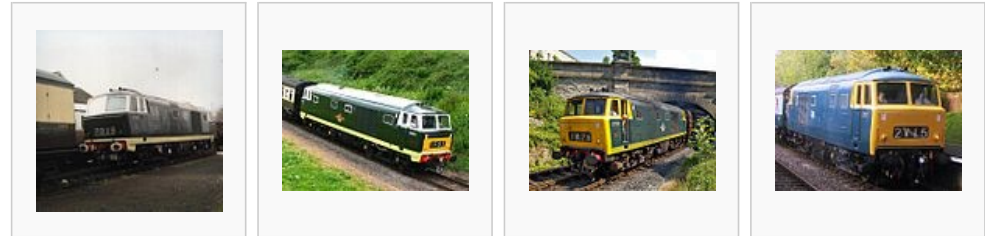
quick links

[East Lancashire Railway - Main Site](#)
[Western Prince D1041 Restoration](#)
[The Class 40 Preservation Society](#)
[ELR Preservation Society](#)

[The Class 15 Preservation Society](#)
[Pioneer Diesel Group \(45135\)](#)
[Bury Valiant Group - 50015](#)
[D9531.com - Ernest](#)

Not all locomotives received the final blue livery. Numbers 7002, 7013, 7020, 7024 and 7054 (at least) were still in green livery when dismantled at Swindon, whilst photographs of numbers 7003, 7005, 7006, 7008, 7021 and 7060 taken late in their lives whilst still green suggest that these may also not have received a repaint in blue. Some of the green locos did receive the same style of full yellow end, extended round the cab side windows that was applied in the final variation of the blue livery. These included nos. 7000, 7009, 7013, 7014, 7020 and 7092 (at least). 7000 and 7009 eventually received the final blue scheme, 7013 and 7020 were withdrawn in green with full yellow ends. The final colour schemes of 7014 and 7092 are not known.

Of those that were repainted blue, numbers 7007, 7010, 7034, 7036, 7046, 7047, 7051, 7052, 7056, 7057 and 7059 (at least) did not receive the full yellow end, only the small yellow warning panel.



Green, no warning panel Green, small panel Green, full warning panel Blue, full warning panel

Operational service [\[edit\]](#)

The type was initially employed on secondary passenger services based around Bristol, such as Paddington to Hereford and semi-fast services to the west of England and Wales. Once they had proved themselves more than capable of handling these duties, they were also assigned to express Paddington-Cardiff-Swansea services, displacing King-class steam locomotives. These duties were heavier than they were designed for, and the Hymeks were displaced when Western and Brush type 4 locomotives became available to allow accelerated timings.

Hymeks also worked pickup freights throughout the Western Region as a mixed-traffic design and were used heavily on inter-regional passenger services. This latter often caused operational problems as they would often terminate in areas where there were no trained staff to handle the locomotive once the rostered crew had 'booked-off'. To avoid these instances, the locomotive would invariably be dispatched back to the nearest Western Region tracks without delay. The Hymeks were capable of operating in multiple, but only with each other. The electro-pneumatic control system (coded "Yellow Triangle") allowed only one trailing locomotive to be controlled (by one driver): some trains were operated by three locomotives (all at the front of the train), but in these cases only two locomotives were connected in multiple, the third having a separate driver.

Hymeks were used all over the Western Region on mixed traffic services from secondary passenger and parcels through express freight to ballast trains. They were common in all parts of the region from Paddington to Bristol/South Wales/Worcester/Hereford. They also worked to Birmingham and the West of England, but were rare west of Plymouth.

Hymeks were notably used in multiple (up to three locomotives) as bankers on the Lickey Incline, propelling mainly freight trains from Bromsgrove to Blackwell. The locomotives allocated to this duty were modified such that the lowest transmission ratio was inoperative, despite the requirement for high tractive effort. The reason for this apparently perverse modification was that the typical speed of a train ascending the bank was approximately that at which the transmission would change between first and second gear, and so it tended to "hunt" between the two. The repeated gear changes under full power caused excessive wear and damage, and the simplest way to avoid the problem was to lock first gear out of action, so the locomotives used only second gear and upwards.^[3]



D7033 piloting [Abergavenny Castle](#) on a South Wales to London service in 1962

 This section requires [expansion](#).
(May 2008)

Accidents and incidents [\[edit\]](#)

- On 13 July 1969, locomotive No. D7048 was involved in an accident at [Spetchley, Worcestershire](#).^[4]

Withdrawal [\[edit\]](#)

The aim of the [Modernisation Plan](#), and in particular the rapid conversion of the entire BR fleet to diesel and electric traction, had been to stem BR's financial losses thought to arise partially from the labour-intensive nature of steam locomotive use. Although steam was eliminated from mainline use by 1968, many unsuitable designs of diesel locomotive had been rushed into service in the rush to achieve steam-free operation. The National Traction Plan of 1967/8 decreed that designs proving unreliable, expensive to maintain or non-standard should be eliminated as quickly as possible in order to reduce the number of diesel classes from 28 to 15 by the year 1974. The engineering factions of the [British Railways Board](#), the body that oversaw BR's operations from 1962 onwards, felt that all of the



Western Region's diesel-hydraulic fleet should be counted as non-standard and should be withdrawn as quickly as possible. The entire class was withdrawn between 1971 and 1975. They were replaced by [Class 37](#) diesel-electric locomotives made redundant in other regions as a result of a general decline in rail-borne freight traffic throughout the 1960s.

Formal withdrawal was not the end for three locomotives: 7076 and 7096 continued to be officially in non-revenue stock for some years; while 7089 also continued, but renumbered as TDB968005 in the Departmental series.

Preservation [edit]

Four locomotives survived to be preserved.

- D7017 - [West Somerset Railway](#)
- D7018 - [West Somerset Railway](#)

D7017 and D7018 have been fully restored to working order since withdrawal. D7017 is now operational after a spell of four years out of traffic. D7018 is currently undergoing repairs at Williton Shed, [West Somerset Railway](#) and is unavailable for traffic. (On 9 May 2009, D7017 successfully hauled a 350ton test train on the WSR, after a four-year overhaul.^[5])

- D7029 - [Severn Valley Railway](#)

D7029 is still undergoing a major restoration, and recently moved from [Old Oak Common](#) shed, in west [London](#), to the [Severn Valley Railway](#) for further restoration, before a planned return to service in BR blue.

- D7076 - [East Lancashire Railway](#)

D7076 survived, along with sister locomotive D7096, at the [Railway Technical Centre](#) near Derby, where they were used as dead loads for research purposes. [Warship](#) no. D832 *Onslaught* was additionally present at this site. Both Hymeks were in poor condition, however it proved possible to rebuild one by using the other as a donor locomotive. D7076 was therefore restored using parts from D7096 and carries the number D7096 internally in one driving cab as a nod to the donor locomotive, which was reduced to a shell and subsequently scrapped.

Having been restored to working order,^[*when?*] and used on service trains, D7076 was taken out of traffic in late 2008 for repairs to a leaking turbo and coolant faults. The engine was subsequently found to need a complete rebuild, so in an unusual move, a Maybach MD-655 engine from D1041 (Western Prince, stopped for overhaul) was fitted into the locomotive to make it a runner. The resulting loco was nicknamed a "WesMek". However, late 2009 / early 2010 D7076 was taken out of traffic due to the Maybach MD-655 engine developing a liner seal problem.

During summer 2011, two ex-Hymek MD-870 engines were discovered in a scrapyard in York, in excellent condition, having been used in a hospital emergency generator set. Both engines were purchased by D7076's owning group, and one has been fitted into D7076, which returned to service at the ELR's July 2011 diesel gala. The other engine is to be retained as a spare.

On the 11th November 2013 it was announced by the ELR:DG that work had started on bodywork repairs at Castlecroft Diesel Depot, and that D7076 will emerge in a new livery ready for their East Lancs Railway Summer Diesel Gala in 2014. In July 2014 D7076 returned to service on the East Lancs Railway in BR Blue Livery with full Yellow ends.

Hymeks in fiction [edit]

A Class 35 Hymek was featured in [The Railway Series](#) books by [Rev. W. Awdry](#) (the original 'Thomas the Tank Engine' stories). [D7101](#) (a fictional number), later named *[Bear](#)* on account of the growling noise made by his engine, was introduced in book No.23 *[Enterprising Engines](#)* as one of the good diesels. He however has not featured in the [Thomas the Tank Engine and Friends](#) TV Series.

A Class 35 Hymek was featured in an episode of Gerry Anderson's "The Secret Service". The episode "Last Train to Bufflers Halt" utilises the blue and white Tri-ang Big Big Hymek as a single unit Bullion Railcar rather than as a proper locomotive. Another Big Big Hymek in the rarer yellow colouring is seen stationary in a siding.

References [edit]

- Reed, Brian (1974). *Diesel-Hydraulic Locomotives of the Western Region*. Newton Abbot: David and Charles. [ISBN 0-7153-6769-2](#).
- Williams, Alan; Percival, David (1977). *British Railways Locomotives and Multiple Units including Preserved Locomotives 1977*. Shepperton: Ian Allen Ltd. [ISBN 0-7110-0751-9](#).
- McManus, Michael. *Ultimate Allocations, British Railways Locomotives 1948 - 1968*. Wirral. Michael McManus.
- Clough, David N. (2011). *Hydraulic vs Electric: The battle for the BR diesel fleet*. [Ian Allan](#). [ISBN 978-0-7110-3550-8](#).

Notes [edit]

- ↑ http://sp9010.ncry.org/Maybach.htm
- ↑ [1]
- ↑ Lewis, JK, "The Western's Hydraulics", [ISBN 978-1-901945-54-6](#)
- ↑ Hoole, Ken (1982). *Trains in Trouble: Vol. 3*. Redruth: Atlantic Books. p. 47. [ISBN 0-906899-05-2](#).



Number D7076 on the [East Lancashire Railway](#)

External links ^[edit]

- East Lancashire Railway : Diesel Group - Home of D7076 [↗]
- Diesel & Electric Preservation Group - owners of D7017 & D7018 [↗]



Wikimedia Commons has media related to *British Rail Class 35*.

V · T · E · British railway locomotives and miscellany, 1948 to present	
Diesel shunters	01 · 01/5 · 02 · 03 · 04 · 05 · 06 · 07 · 08 · 09 · 10 · 11 · 12 · 13 ·
Diesel shunters (pre-TOPS)	11001 · 11104 · 15107 · 13000 · D1/1 · D1/2 · D1/3 · D1/4 · D2/1 · D2/2 · D2/3 · D2/4 · D2/5 · D2/6 · D2/7 · D2/8 · D2/9 · D2/10 · D2/11 · D2/12 · D3/1 · D3/2 · D3/3 · D3/4 · D3/5 · D3/6 · D3/7 · D3/8 · D3/9 · D3/10 · D3/11 · D3/12 · D3/13 · D3/14 ·
Main-line diesels:	14 · 15 · 16 · 17 · 18 · 20 · 21 (I) · 21 (II) · 22 (I) · 23 · 24 · 25 · 26 · 27 · 28 · 29 · 30 · 31 · 33 · 35 · 37 · 38 · 40 · 41 (I) · 41 (II) · 41 (III) · 42 · 43 (I) · 43 (II) · 44 · 45 · 46 · 47 · 48 (I) · 48 (II) · 50 · 51 · 52 · 53 · 55 · 56 · 57 · 58 · 59 · 60 · 61 · 62 · 65 · 66 · 67 · 68 · 70 (II) ·
Main-line diesels (pre-TOPS)	10000–10001 · 10100 · 10201–10203 · 10800 · D8/1 · D8/2 · D10/1 · D10/2 · D10/3 · D11/1 · D11/2 · D11/3 · D11/4 · D11/5 · D12/1 · D12/2 · D12/3 · D13/1 · D14/1 · D14/2 · D15/1 · D15/2 · D16/1 · D16/2 · D17/1 · D17/2 · D20/1 · D20/2 · D22/1 · D22/2 · D23/1 · D25/1 · D27/1 · D33/1 ·
Electrics	22 (II) · 70 (I) · 71 · 72 · 73 · 74 · 75 · 76 · 77 · 80 · 81 · 82 · 83 · 84 · 85 · 86 · 87 · 88 (I) · 88 (II) · 89 · 90 · 91 · 92 · 93 ·
Electrics (pre-TOPS)	AL1 · AL2 · AL3 · AL4 · AL5 · AL6 · EB1 · EE1 · EF1 · EM1 · EM2 · ES1 · HA · HB · JA · JB ·
Departmental	97 · 97/6 · Eastern · Southern · Other Series ·
Prototypes	15097–15099 · 18000 · 18100 · D0226/D0227 · D0260 · D0280 · D2999 · DHP1 · DP1 · DP2 · GT3 · HS4000 · Janus · Taurus ·
Steam locomotives	98 ·
Ships	99 ·
Lists: Diesel locomotives · Electric locomotives · Miscellaneous locomotives · Diesel multiple units · Electric multiple units · Departmental multiple units ·	

Categories: [British Rail diesel locomotives](#) | [B-B locomotives](#) | [Beyer, Peacock locomotives](#) | [Diesel-hydraulic locomotives of Great Britain](#) | [Railway locomotives introduced in 1961](#)